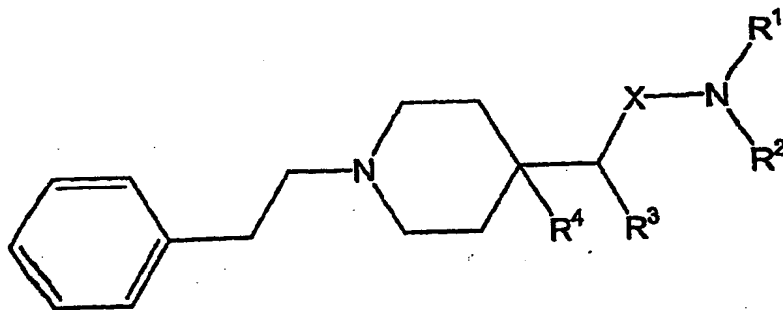


III. CLAIM AMENDMENTS

1. (Original) Substituted 1-phenethylpiperidine compounds of the general formula I



I,

in which

X denotes a methylene (CH₂) or carbonyl (C=O) group,

R¹ denotes an optionally at least mono-substituted aryl or heteroaryl residue,

R² denotes H, COR⁵, SO₂R⁵, an optionally at least mono-substituted, saturated, branched or unbranched aliphatic C₁₋₁₀ residue, an optionally at least mono-substituted, at least mono-unsaturated, branched or unbranched aliphatic C₂₋₁₀ residue, an optionally at least mono-substituted, saturated or at least mono-unsaturated cycloaliphatic C₃₋₈ residue, an optionally at least mono-substituted aryl or heteroaryl residue or an optionally at least mono-substituted aryl or heteroaryl residue attached via a C₁₋₃ alkylene group, R³ and R⁴ each separately denote H or together denote a bond,

R⁵ denotes an optionally at least mono-substituted, saturated, branched or unbranched aliphatic C₁₋₁₀ residue, an optionally at least mono-substituted, at least mono-unsaturated, branched or unbranched aliphatic C₂₋₁₀ residue, an optionally at least mono-substituted, saturated or at least mono-unsaturated cycloaliphatic C₃₋₈ residue, an optionally at least mono-substituted aryl or heteroaryl residue or an optionally at least mono-substituted aryl or heteroaryl residue attached via a C₁₋₃ alkylene group,

as a free base or a corresponding physiologically acceptable salt and corresponding racemates, enantiomers and diastereomers.

2. (Original) Substituted 1-phenethylpiperidine compounds according to claim 1, characterised in that X denotes a methylene (CH₂) group.

3. (Currently Amended) Substituted 1-phenethylpiperidine compounds according to claim 1 or 2, characterised in that R¹ denotes an optionally at least mono-substituted aryl residue.

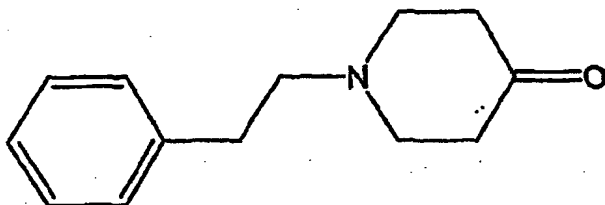
4. (Currently Amended) Substituted 1-phenethylpiperidine compounds according to ~~one of claims 1 to 3~~ claim 1, characterised in that R² denotes H, COR⁵, SO₂R⁵ or denotes a C₁₋₆ alkyl residue, preferably denotes H or COR⁵.

5. (Currently Amended) Substituted 1-phenethylpiperidine compounds according to ~~one of claims 1 to 4~~claim 1, characterised in that the residues R³ and R⁴ each denote H.

6. (Currently Amended) Substituted 1-phenethylpiperidine compounds according to ~~one of claims 1 to 5~~claim 1, characterised in that the residue R⁵ denotes a C₁₋₆ alkyl residue or denotes an unsubstituted or at least mono-substituted aryl residue.

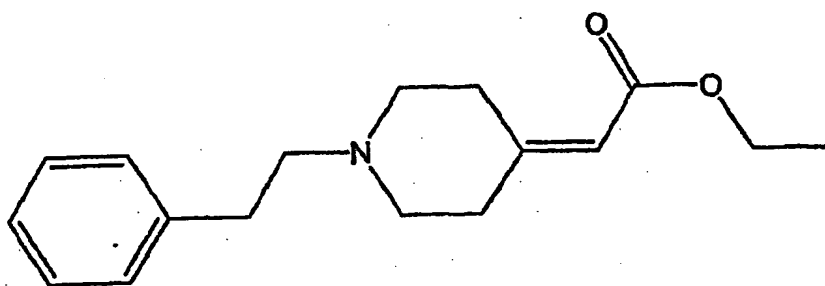
8. (Currently Amended) A process for the production of substituted 1-phenethylpiperidine compounds of the general formula I according to ~~one of claims 1 to 7~~claim 1, characterised in that

(a) 1-phenethylpiperidin-4-one of the formula II



II

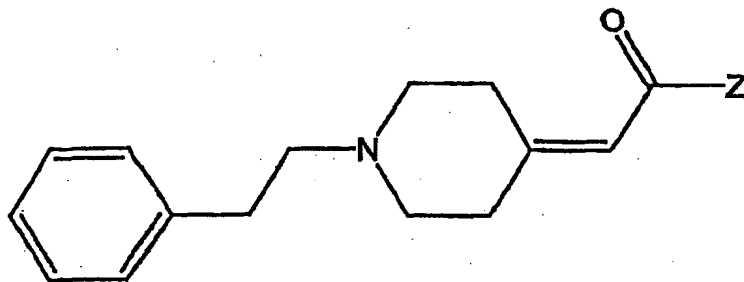
is reacted with triethyl phosphonoacetate in solution to yield (1-phenethylpiperidin-4-ylidene)-ethyl acetate of the formula III



III

and this is optionally purified in accordance with conventional methods and/or optionally isolated in accordance with conventional methods,

(b) optionally the (1-phenethylpiperidin-4-ylidene)-ethyl acetate of the formula III is converted in accordance with conventional methods into a compound of the general formula IV,

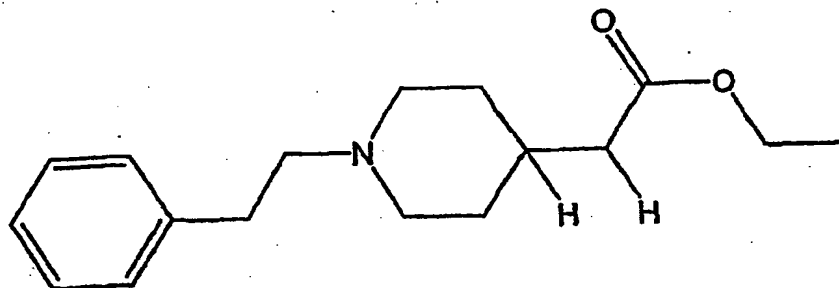


IV

in which Z denotes a group which activates the carbonyl carbon atom for reaction with an amine, the compound of the general formula IV thus obtained is optionally purified in accordance with conventional methods and/or

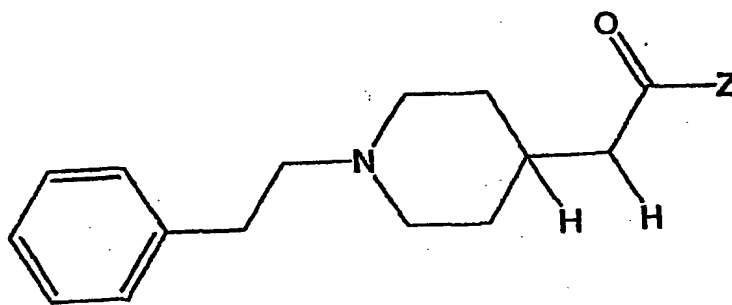
optionally isolated in accordance with conventional methods,

(c) optionally at least one of the compounds of the formula III or IV in solution is reduced to yield a corresponding compound of the general formula III'



III'

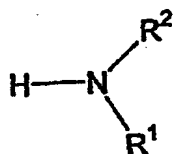
or to yield a corresponding compound of the general formula IV'



IV'

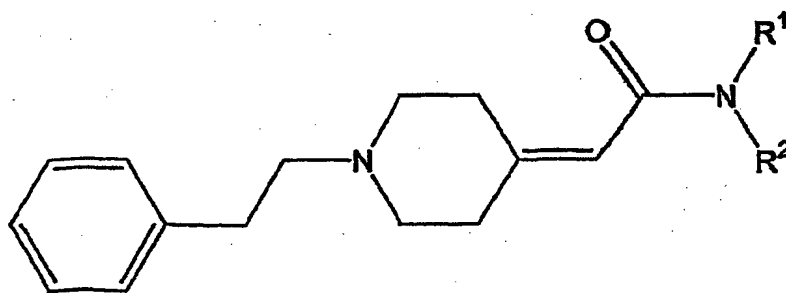
and the corresponding compound is optionally purified in each case in accordance with conventional methods and/or optionally isolated in each case in accordance with conventional methods,

(d) at least one compound of the formula III, III', IV and IV' in solution is reacted with a primary or secondary amine of the general formula V,



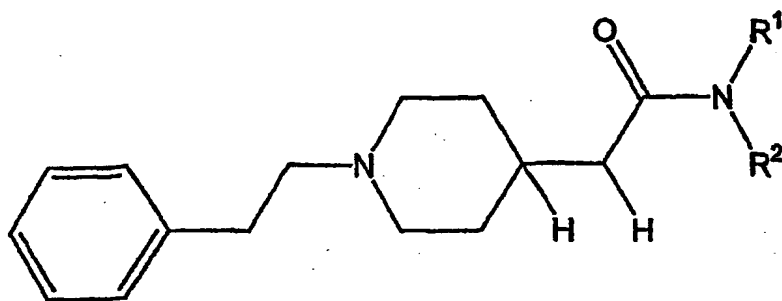
V

in which R¹ and R² have the meaning according to the above-stated general formula I, to yield at least one compound of the general formula Id



Id

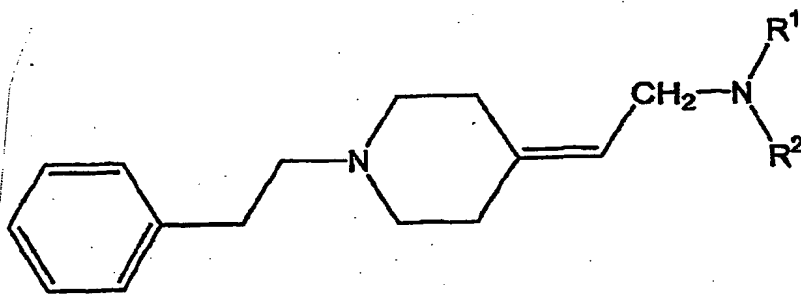
and/or at least one compound of the general formula Id'



Id'

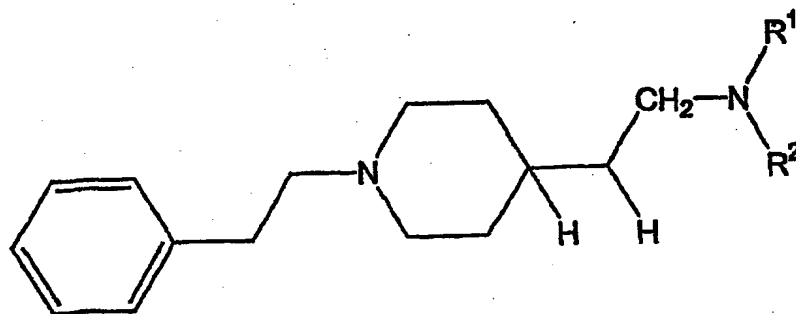
and this is optionally purified in each case in accordance with conventional methods and/or optionally isolated in each case in accordance with conventional methods,

(e) optionally at least one of the compounds of the general formula Id and/or Id' is converted by reduction in solution into at least one compound of the general formula Ie



Ie

and/or at least one compound of the general formula Ie'



Ie'

in which R¹ and R² each have the meaning according to claim 1, and this is optionally purified in each case in accordance with conventional methods and/or optionally isolated in each case in accordance with conventional methods,

(f) optionally at least one compound of the general formula Ie and/or Ie', in which the residue R² denotes H, is converted in accordance with conventional methods known to the person skilled in the art into at least one compound of the general formula Ie and/or Ie', in which the residue R² denotes COR⁵, SO₂R⁵, an optionally at least mono-substituted, saturated, branched or unbranched aliphatic C₁₋₁₀ residue, an optionally at least mono-

substituted, at least mono-unsaturated, branched or unbranched aliphatic C₂₋₁₀ residue, an optionally at least mono-substituted, saturated or at least mono-unsaturated cycloaliphatic C₃₋₈ residue, an optionally at least mono-substituted aryl or heteroaryl residue or denotes an optionally at least mono-substituted aryl or heteroaryl residue attached via a C₁₋₃ alkylene group, wherein the residue R⁵ has the above-stated meaning and this is optionally purified in accordance with conventional methods and/or optionally isolated in accordance with conventional methods.

9. (Original) A process according to claim 8, characterised in that Z denotes OH, Cl or a succinimide residue.

10. (Currently Amended) A process according to claim 8 ~~or 9~~, characterised in that the reduction to yield the compounds of formula III' or IV' is performed with hydrogen in the presence of a transition metal catalyst, preferably in the presence of palladium powder.

11. (Currently Amended) A process according to ~~one of claims 8 to 10~~claim 8, characterised in that the reaction with a primary or secondary amine of the general formula V is performed in the presence of n-butyllithium.

12. (Currently Amended) A process according to ~~one of claims 8 to 11~~claim 8, characterised in that reduction to yield a compound of the general formula Ie or Ie' proceeds with aluminium hydride (alane) produced in situ

from lithium aluminium hydride and aluminium trichloride in an organic solvent.

13. (Currently Amended) A pharmaceutical preparation containing at least one substituted 1-phenethylpiperidine compound according to ~~one of claims 1 to 7~~claim 1 and optionally physiologically acceptable auxiliary substances.

14. (Original) A pharmaceutical preparation according to claim 13 for combatting pain.

15. (Original) A pharmaceutical preparation according to claim 13 for the treatment of migraine.

16. (Original) A pharmaceutical preparation according to claim 13 for the treatment of diarrhoea.

17. (Original) A pharmaceutical preparation according to claim 13 for the treatment of urinary incontinence.

18. (Original) A pharmaceutical preparation according to claim 13 for the treatment of pruritus.

19. (Original) A pharmaceutical preparation according to claim 13 for the treatment of inflammatory reactions.

20. (Original) A pharmaceutical preparation according to claim 13 for the treatment of allergic reactions.

21. (Original) A pharmaceutical preparation according to claim 13 for the treatment of the abuse of alcohol and/or drugs and/or medicines.

22. (Original) A pharmaceutical preparation according to claim 13 for the treatment of dependency on alcohol and/or drugs and/or medicines.

23. (Original) A pharmaceutical preparation according to claim 13 for the treatment of inflammation.

24. (Original) A pharmaceutical preparation according to claim 13 for local anaesthesia.

25. (Currently Amended) Use of at least one substituted 1-phenethylpiperidine compound according to ~~one of~~ claim 1 to produce a pharmaceutical preparation for the combatting of pain, for the treatment of migraine, diarrhoea, urinary incontinence, pruritus, inflammatory reactions, allergic reactions, dependency on alcohol and/or drugs and/or medicines, abuse of alcohol and/or drugs and/or medicines, inflammation or for local anaesthesia.